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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/729,701	12/06/2000	Yutaka Maruyama	1232-4475US1	6870

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EXAMINER	
TUGBANG, ANTHONY D	

ART UNIT	PAPER NUMBER
3729	

DATE MAILED: 12/14/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/729,701	MARUYAMA ET AL.	
	Examiner	Art Unit	
	A. Dexter Tugbang	3729	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *28 September 2005*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *14,17-22 and 24-26* is/are pending in the application.

4a) Of the above claim(s) *24-26* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *14 and 17-22* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☒ Certified copies of the priority documents have been received in Application No. 09/162,378.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Response to Amendment

1. The applicant(s) amendment filed on September 28, 2005 has been fully considered and made of record.

2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Election/Restrictions

3. The restriction requirement between Groups I and II in the Office Action, dated June 2, 2004 is hereby repeated and maintained. Claims 24-26 continue to stand as being withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected invention, there being no allowable generic or linking claim. Applicant timely traversed the restriction (election) requirement in the reply filed on 4/4/05.

Claim Rejections - 35 USC § 112

4. Claims 14 and 17-22 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In Claim 14, there is a great deal of confusion with the "wherein..." clause (lines 16-19) because the wherein clause is redundant with the phrase of "carbon fibers...phase" (lines 10-12) and is simply not understood as to why it is even needed. Accordingly, the claims are rendered as vague, indefinite and misleading.

Claim Rejections - 35 USC § 103

5. Claims 14, 17, 19, 22 and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of Imasaka et al, Watanabe et al, and Mochida et al 5,205,888.

Imasaka et al discloses a vibration type driving apparatus comprising the following structure: a vibration member (piezoelectric element 1a in Fig. 2); a contacting member (stator 2a) contacting the vibration member; and a friction member 4a provided on the contacting portion (top surface) of the contacting member 2a.

Regarding Claim(s) 14 and 19, Imasaka teaches at least one example in that the friction member 2a is formed from a resin composition containing a pitch based carbon fiber and at least polyimide resin (see col. 2, lines 33+ and Table 2).

Regarding Claim(s) 17, Imasaka shows at least two examples (A and B in Table 2) that the content of the pitch based carbon fiber in the friction member can be either 10 or 20 wt%.

Regarding Claim(s) 22, Imasaka further teaches that the vibration type driving apparatus is a motor, which acts a drive source for electric power (see col. 1, lines 13+).

Imasaka does not appear to mention that the pitch based carbon fiber is in a "mesophase" state such that it can be called a "mesophase pitch based carbon fiber". Imasaka also does not teach that the "mesophase pitch based carbon fiber" is made from mesophase pitch producing mesophase optically exhibiting anisotropy. It is noted that the term mesophase is defined as the degree to which the carbon fiber has liquid crystalline properties[1].

[1] IUPAC Compendium of Chemical Terminology.

Watanabe teaches that allowing carbon fibers to be in a mesophase pitch based state with a degree of liquid crystalline properties (see Claims 4 and 5), has the advantages of providing a resin composition with suitable molding properties (see col. 4, lines 44-48).

Mochida teaches that resin compositions containing "mesophase pitch carbon fiber" made from "mesophase pitch producing mesophase optically exhibiting anisotropy" (see col. 3, lines 13+) has the advantages of providing properties of high strength. high heat, chemical and wear resistances (see col. 1, lines 6+).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the carbon fibers of Imasaka by forming the carbon fibers in a "mesophase pitch based" state made from "mesophased pitch producing mesophase optically exhibiting anisotropy", as taught by Watanabe and Mochida, to provide the advantages of a resin composition with: 1) suitable molding properties; and 2) high strength, heat, chemical and wear resistances.

6. Claims 18, 20 and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Imasaka et al, Watanabe et al, and Mochida et al, as applied to Claim 14 above, and further in view of Tamai et al.

Imasaka, as modified by Watanabe and Mochida, disclose the claimed apparatus as previously discussed above. The modified Imasaka apparatus does not mention the specific resin compositions recited in each of Claims 18, 20 and 21.

Tamai suggests that resin compositions can include either one of a fluroresin, molybdenum disulfate, or a polyimide powder (see col. 39, lines 3+), for the benefits of improving wear resistance in the molded resin composition (see col. 17, lines 13+).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the resin composition of Imasaka by utilizing the various compositions of resins taught by Tamai, to provide the benefits of mechanical strength and improved wear resistance in the resin composition of the friction member.

Response to Arguments

7. The applicant(s) arguments filed on September 28, 2005 with respect to Claims 14 and 17-22 have been considered, but have not been deemed to be found as persuasive.

In regards to the merits of the prior art above, the applicant(s) assert that none of the references teach that the carbon fibers are made from a "mesophase pitch".

The examiner most respectfully traverses as the features of the carbon fibers being made from a "mesophase pitch" was relied upon in the teachings of both Watanabe et al and Mochida et al. While the examiner understands that there are differences between the two kinds of carbon fibers (as explained by the applicant(s) in there remarks, page 7 of the response of September 28, 2005), this does take away from the fact that prior art above specifically recites and uses "mesophase pitch carbon fibers". Take for example Mochida. Mochida explicitly recites the use of "mesophase pitch carbon fibers" beginning at col. 3, lines 14+. So the examiner's position is that the "mesophase pitch carbon fibers" as claimed, do not distinguish over the carbon fibers of Watanabe and Mochida, and that the combination of Imasaka, Watanabe, and Mochida would still be obvious to one of ordinary skill in the art.

In response to applicant's argument that there is no suggestion or motivation to combine the references, the examiner recognizes that obviousness can only be established by combining

or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, the examiner again reiterates that the references to Imasaka et al, Watanabe et al, and Mochida et al, each share the common problems associated with resin compositions as Watanabe and Mochida each have certain advantages for using mesophase pitch carbon fibers.

Conclusion

8. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to A. Dexter Tugbang whose telephone number is 571-272-4570. The examiner can normally be reached on Monday - Friday 8:30 am - 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Peter Vo can be reached on 571-272-4690. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

A. Dexter Tugbang
Primary Examiner
Art Unit 3729

December 6, 2005